Amendments to the Claims:

Please amend claims 29-39, 43-45, 47-49 and 52 as follows:

1 - 28. (Cancelled)

29. (Currently Amended) A device for automated evolutionary assistance to air traffic controllers including a computer having a software program permitting the receipt of data for equipping an air traffic control system including flight plans of aircraft and Radars and elaborating and displaying them to air traffic controllers, the air traffic controllers having a radiotelephony link for communicating with the aircraft, the device comprising:

~~means for establishing a data link with the aircraft;~~

a software module ~~means~~ for establishing and updating a computer agenda, which is a list of the aircrafts' potential conflicts~~, of potential conflicts~~ on the basis of ~~all the~~any information and computation means of the computer;

~~means for automatically collecting, via said data link, in on-board aircraft computers, complementary data for establishing said computer agenda;~~

said software module configured ~~means~~ for selecting, among said computer agenda, potential conflicts on crossing trajectories which ~~can be solved~~are solvable by modification(s) of aircraft speed, climbing or descending rates~~,~~ and lateral shift of route, said modification(s) being so minor as to not interfere with ~~current~~ the air traffic controllers' decision making processes; and

a data link between said computer and an on-board computer of the aircraft, the data-link being used for automatically:

(i) collecting complementary data from said on-board computer of the aircraft, said complementary data including flight data for establishing said computer agenda, and

(ii) ~~means for automatically~~ transmitting said minor modification(s) of flight parameters to said on-board computer for execution by the aircraft ~~via said data-link to selected aircraft and~~ without requiring the air traffic controllers' prior agreement ~~when said modifications of flight parameters stay within limits of the fuzziness of the controllers' vision and thereby are "subliminal" to the controllers; and~~

~~means for executing said modifications by automating means in said selected aircraft~~.

30. (Currently Amended) The device according to claim 29, ~~further including means~~ wherein said software module is further configured for elaborating optimal solutions to ~~other~~ residual potential conflicts ~~figuring in said computer agenda~~which would interfere with the controllers' decision making processes.

31. (Currently Amended) The device according to claim 29, ~~further including means~~ wherein said software module is configured for determining in real time among said potential conflicts within said ~~controllers'~~ computer agenda those which are false conflicts and displaying the false conflicts on a display of a sector in charge of ~~implied~~ the aircraft.

32. (Currently Amended) The device according to claim 29, ~~further including means~~ wherein said software module is configured for updating potential conflicts into said computer agenda even before ~~implied~~ the aircraft have entered in a control sector ~~in which the conflict could happen~~with a potential conflict.

33. (Currently Amended) The device according to claim 29, ~~further including means for~~ wherein said software module is configured for selecting in said computer agenda particularly sensitive conflicts that lead to the occurrence of conflict clusters that are difficult to solve.

34. (Currently Amended) The device according to claim 33, ~~further including means~~ wherein said software module is configured for proposing solution(s) for avoiding such occurrence on a display screen of the air traffic controllers presently in charge of the aircraft when said conflicts only occur in a following sector.

35. (Currently Amended) The device according to claim 33, ~~further including means~~ wherein said software module is configured for proposing ~~to controllers,~~ transfer conditions of an aircraft to a following sector to the air traffic controllers.

36. (Currently Amended) The device according to claim 29, further including ~~means~~ a display device for displaying to air traffic controllers' icons in bi-univocal relationship with aircraft pairs on said ~~controllers'~~ computer agenda, said icons serving as a virtual keyboard for addressing in return specific messages to the computer concerning said aircraft pairs.

37. (Currently Amended) The device according to claim 36, ~~further including means~~ wherein said display device is configured for displaying the aircraft pairs of said ~~controller~~ computer agenda, and a specific icon that makes displaying the virtual keyboard specifically adapted to the situation when designated by the air traffic controllers.

38. (Currently Amended) The device according to claim 30 further including ~~means~~a display device for displaying on said ~~controllers'~~ computer agenda an icon that indicates the air traffic controllers' desire to know the solution(s) elaborated by the computer and means for informing said computer of the chosen solution when designated by the air traffic controllers~~controllers or assistant controllers~~.

39. (Currently Amended) The device according to claim 38, ~~further including means for~~ wherein said computer module is configured for automatically transferring the chosen solution to concerned aircraft for execution.

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Currently Amended) The device according to claim 29, further including a display device ~~means~~ for ~~elaborating a display making appear~~displaying each aircraft pair in potential conflict ~~on the form of~~as a point and ~~of~~ its speed vector, the coordinates of said point being respectively the delay between ~~the~~ a present moment and ~~the~~ a moment when said aircraft ~~pairs~~ pair will have a minimum longitudinal separation, and ~~in ordinates~~ the separation distance at ~~this~~ the present moment.

44. (Currently Amended) The device according claim 43, wherein said computer module ~~device~~ is further ~~arranged~~ configured for associating a label providing any necessary data concerning the aircraft with the point representing the aircraft pair.

45. (Currently Amended) The device according to claim 43, wherein said computer module ~~device~~ is further ~~arranged~~ configured for associating an indicator giving ~~their~~ a vertical separation distance when their horizontal separation distance is~~will be~~ minimum with the point representing the aircraft pair.

46. (Previously Presented) The device according to claim 43, wherein a designation by a controller of an aircraft on any display screen makes the aircraft and an aircraft conflicting with it appear on other display screens.

47. (Currently Amended) The device according to claim 39 ~~further including means for~~ wherein said computer module is configured for receiving ~~from said aircraft~~ data confirming the proper execution of instructions from said aircraft.

48. (Currently Amended) The device according to claim 47, ~~further including means~~ wherein said computer module is configured for sending a message to two conflicting aircraft for sub-delegating to the conflicting aircraft the responsibility of insuring their safe separation by their own means according to clearances ~~defined by said device and~~ chosen among a set of possible conflict resolution manoeuvres.

49. (Currently Amended) The device according to claim 48, ~~further including means~~wherein said computer module is configured for insuring automatic display of the delegated conflict, so that said ~~controllers'~~ computer agenda provides a permanent monitoring board displaying a list of the delegated conflicts and a list of potential conflicts still to be solved.

50. (Cancelled)

51. (Cancelled)

52. (Currently Amended) A method for automated evolutionary assistance to air traffic controllers including a computer having a software program permitting the receipt of data for equipping an air traffic control system including flight plans of aircraft and radars and elaborating and displaying them to air traffic controllers, the air traffic controllers having a radiotelephony link for communicating with the aircraft, the method comprising:

~~establishing a data link with the aircraft;~~

establishing and updating a computer agenda, which is a list of the aircrafts' potential conflicts~~, of potential conflicts~~ on the basis of ~~all the~~any information and computation means of the computer;

~~automatically collecting, via said data link, in on board aircraft computers, complementary data for establishing said computer agenda;~~

selecting potential conflicts on crossing trajectories which ~~can be solved~~are solvable by modification(s) of aircraft speed, climbing or descending rates, and lateral shift of route, said modification(s) being so minor as to not interfere with ~~current~~ the air traffic controllers' decision making processes;

establishing a data link between said computer and an on-board computer of the aircraft, the data-link being used for automatically:

(i) collecting complementary data from said on-board computer of the aircraft, said complementary data including flight data for establishing said computer agenda, and

(ii) ~~automatically~~ transmitting said minor modification(s) of flight parameters ~~via said data-link to selected aircraft and~~to said on-board computer for execution by the aircraft without requiring the air traffic controllers' prior agreement ~~when said modifications of flight parameters stay within limits of the fuzziness of the controllers' vision and thereby are "subliminal" to the controllers; and~~

~~executing said modifications in said selected aircraft~~.